

Mayor Will Wynn City of Austin, Texas

The Solar Industry in Austin, Texas

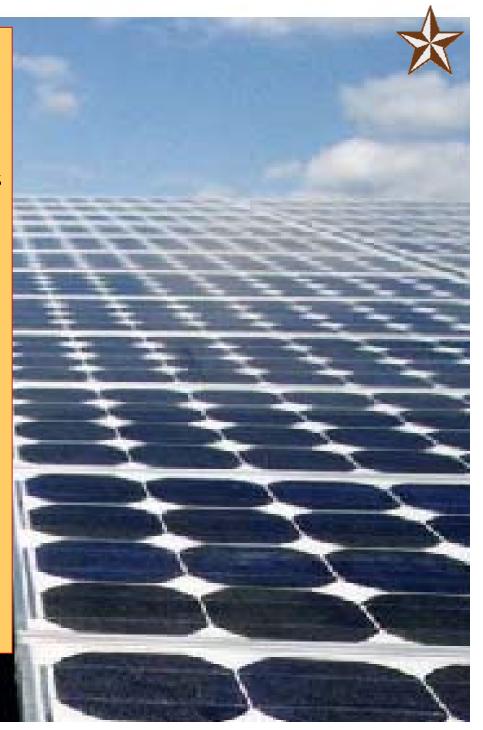
1st Annual Solar America Cities Meeting April 14-17, 2008 Tucson, AZ







- •2007 Population: 750,000
- •14th Largest City in United States
- •2007 MSA Population: 1,522,000
- •47.7% change: 1990-2000
- City owned Electric Utility
 - •360,000 customers
 - •10th Largest Municipal
- Live Music Capital
- Number One Place for Business





"...the city of Austin has taken the reins. Its Climate Protection Plan, unveiled last February by Mayor Will Wynn, is seen by environmentalists as the country's most aggressive municipal initiative aimed at reducing greenhouse gases."

Newsweek February 2008



Municipal Plan:

- Power 100% of City facilities with renewable energy by 2012
- Make the entire city fleet of vehicles carbon neutral by 2020
- Departmental GHG and energy plans
- Employee education, action and outreach

All COA facilities, fleets and operations 100% carbon neutral by 2020

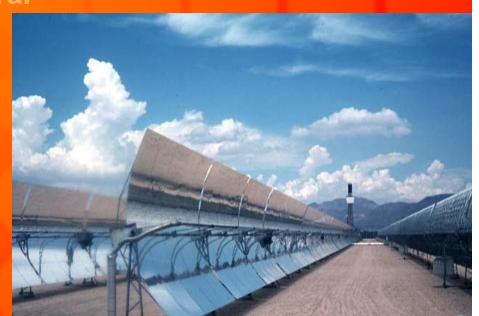




Utility Plan:

- •700 MW through efficiency and conservation by 2020
- •30% of energy needs through renewables by 2020
- All new generation carbon neutral
- Carbon cap and reduction plan

Most aggressive
GHG-reduction
& clean energy plan
in the nation





Homes and Buildings Plan:

- •All new single-family homes zero net-energy capable by 2015
- Increase efficiency in other buildings by 75% by 2015
- Improve efficiency in existing buildings
- Enhanced Green Building program

Most energy-efficient building codes in the nation





Community Plan:

- Establish City Climate Action Team
- Inventory GHG from activities community-wide
- Work with stakeholders and technical advisors
- Report to Council
 with GHG-reduction
 targets and strategies





"Go Neutral" Plan:

- Help individuals and groups measure carbon footprint
- •Provide opportunities to fund <u>local</u> GHG measures through offset credits
- Develop recognition program

Promote carbon neutrality with visitors

Everyone can "Go Neutral" and zero-out their carbon footprint



City of Austin Solar Programs

- Austin Energy
 - Residential Rebates
 - Commercial Rebates
 - Solar for Schools
 - Solar for City Facilities
- Austin Technology Incubator
 - Clean Energy Incubator
- Austin Chamber of Commerce
 - Clean Energy Council
- Economic Development
 - Invest in Solar Industry in Austin
 - HelioVolt Corporation

Austin Energy

- 10th largest municipally-owned electric utility in the nation
- Programs:
 - Top "green" utility in the nation for its GreenChoice program
 - Green Building Program started in 1991
 - Energy conservation programs have offset 700MW of power since 1982
 - Plug-in Partners National Campaign
 - Clean Technology Beta Test Program in partnership with Clean Energy Incubator
 - Solar Rebate Program \$4.50/watt (\$5.60/watt)
 - Solar for Schools
 - Solar for City Facilities

Austin Energy's Strategic Plan

- One of the nation's most ambitious solar initiatives.
- 30 MW of solar by 2009.
- 100 MW of solar by 2020.
- Rebates among the nation's largest.
- Solar for Schools.
- City Facilities Solar Demonstrations.

Rebate Program Summary

Year	Residential Rebates Paid (\$)	Commercial Rebates Paid (\$)
FY04	\$0.1 M	\$.01 M
FY05	\$1.8 M	\$1.0 M
FY06	\$2.1 M	\$0.3 M
FY07	\$1.8 M	\$0.7 M
FY08 to date	\$0.9 M	\$0.4 M
Total	\$6.7 M	\$2.5 M

Commercial Rebates - Applied Material (20 kW)



Solar for Schools 3.5 kW System



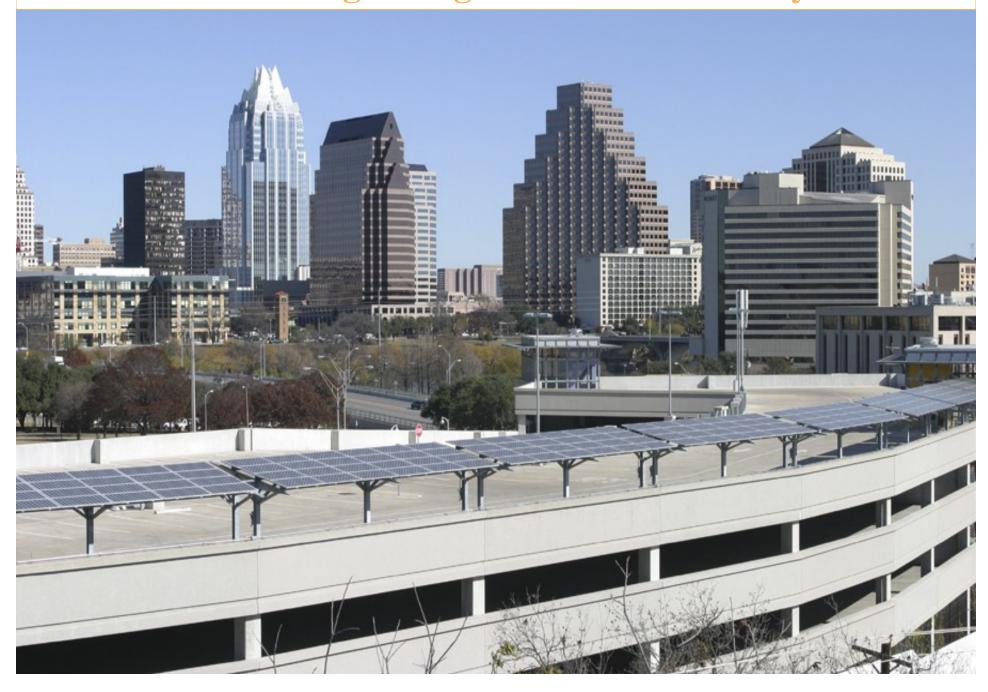
Solar for City Facilities

- Program Purpose
 - To educate citizens of Austin about photovoltaics though highly visible installations
 - Meet Strategic Planning and Climate Protection goals

Solar for City Facilities

- Installed first project in 1986
- 24 projects, 230 kW in Austin Energy's Portfolio
 - Past projects mostly small demonstrations many with indoor public displays
 - Includes several BIPV projects
 - New projects are larger and use available roof area
- PPA for energy from 700 kW Sun Edison Project
- 30 MW or larger project being investigated

Palmer Parking Garage has a 28 KW PV System



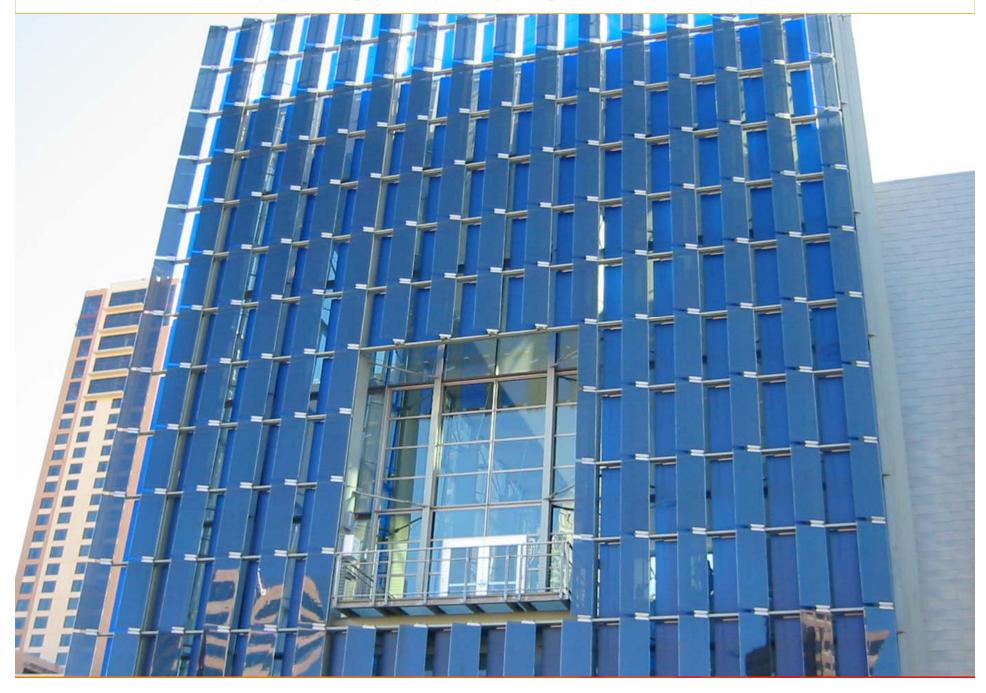
Austin Airport - Taxi Staging Area 30 kW PV System



Austin City Hall - 10 kW



Austin Convention Center - 5 kW



ATI – a program of UT-Austin's IC² Institute

UT - Austin

IC2 Institute

ATI

T Clean Energy (CEI) Wireless Bioscience

Clean Energy Incubator

- CEI is credited with making Austin the top city in cleantech incubation (SustainLane Government ranking – 2006)
- CEI, started in 2001 through NREL, is a division of ATI (UT Austin – IC2 Institute)
- CEI offers an environment dedicated to helping clean energy companies succeed
- CEI assists startups with attracting funding, beta testing technologies, assembling management teams, and executing business plans
- CEI focuses on clean technologies that minimize natural resource depletion, maximize renewable resources, further U.S. energy independence, and curb global climate change

Austin Chamber

- Clean Energy Council
- Clean Energy Venture Summit
- CleanTX Forum
- Solar Energy Entrepreneurs Network (SEEN)
- Clean Energy company recruitment, relocation, expansion efforts
- Clean Energy policy change/adoption efforts
- Clean Energy strategy alignment with CEI, CTSI, AE, UT Austin, City of Austin, and State of Texas

City of Austin Economic Development

- Emerging Technology Program
- Program Focuses on Clean Energy
 - Solar, Wind, and Electric Vehicles



HelioVolt Corporation -

Next Generation Solar Products

Founded: 2001

Location: Austin, TX

80+ (160 expected by end of 2008) **Employees:**

Technology:

Revolutionary method for manufacturing high-efficiency

CIGS PV circuits

\$101M Private Equity Financing Financing:

Building commercial production facility in Austin Facility:





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